

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number
WO 2005/073555 A1

(51) International Patent Classification⁷: **F04B 9/107**,
47/10

(21) International Application Number:
PCT/CA2005/000096

(22) International Filing Date: 27 January 2005 (27.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/765,979 29 January 2004 (29.01.2004) US

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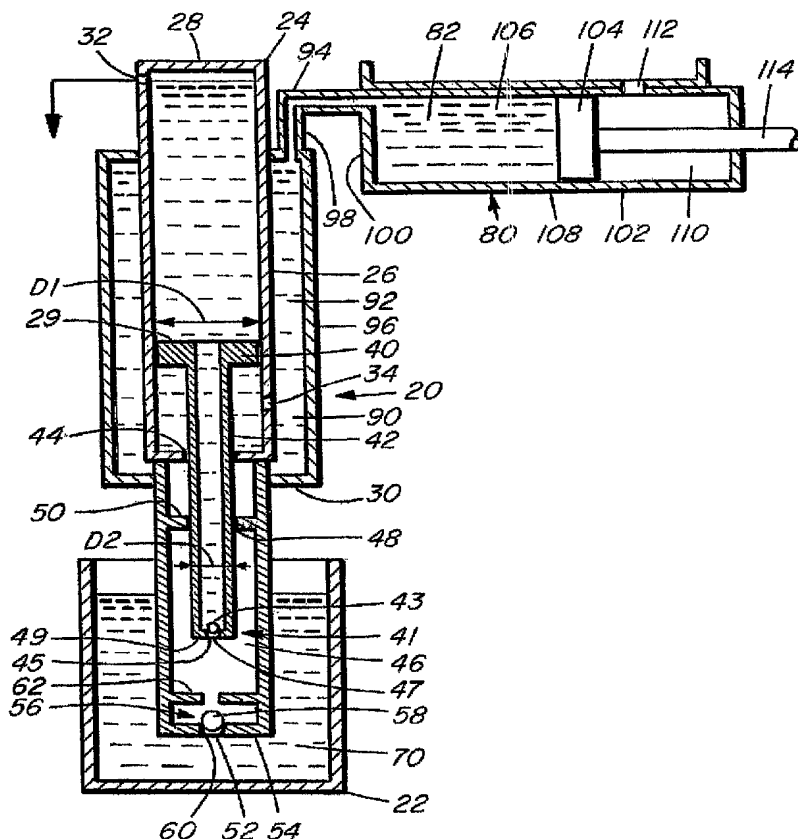
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: HYDRAULIC RAM PUMP



(57) Abstract: A piston type pumping apparatus comprises a vertically oriented cylinder having a top and a bottom with a first aperture. There are first and second passageways for liquid in the cylinder at the top and bottom respectively thereof. A piston is reciprocally mounted within the cylinder and has an area against which pressurized fluid acts in the direction of movement of the piston. A hollow piston rod is connected to the piston and extends below the piston and slidably through the first aperture. There is a reload chamber below the cylinder. The piston rod extends slidably into the reload chamber and has a third passageway for liquid communicating thereto. A first one-way valve is located in the third passageway. There is also a fourth passageway that extends from the reload chamber to a source of liquid to be pumped and a second one-way valve therein.

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GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

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